

# Sambou KONE

Sector 5, Mamaribougou Bougoudaba, Bamako, Mali West Africa

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*Dual Bachelor's degrees in Computer Engineering & Telecom and Electronics & Communications Engineering (ECE) with Strong Background in Hardware and AI intersection, Skilled enhancing reasoning in various architectures, with strong motivation to pursue a Research Position Advancing Machine Learning accelerated in Embedded Intelligent Systems and Designs.*

**Skills: C/C++, Python, MATLAB, ML frameworks, VLSI, Embedded Systems, Wireless Systems.**

## EDUCATION

2020-2024

**BTech** - Electronics and Communication (Topper **4.56/5.0**), **Jain University - Bangalore**

B.Tech Thesis: 'Smart Battery Management Systems to Enhance Battery Life Based on Deep Learning'

Supervisor: Prof. Sunil MP

Submission: Proposed date – November 2023

Research Methods: Deep learning models built in Python (Scikit-learn, TensorFlow) estimated SoC, SoH, and RUL with high accuracy. Evaluation using MAE, RMSE, and  $R^2$  showed clear improvements over traditional BMS method

Course works: , Electrical Circuits I-II, Digital System Design, Numerical Methods, Probability Theory, Statistics, Electronics I-II, Signals and Systems, Electromagnetic Field Theory, Pattern Recognition, Introduction to Digital Signal Processing, Introduction to Digital Communications, VLSI, System On Chips , Introduction to Image Processing, Python , Introduction to Data Science Machine Vision, MATLAB.

2016-2019

**B.Eng. of Computer Eng. & Telecom., National School of Engineering ENI ABT Bamako - Mali**

Modules: SQL, HTML/CSS, Java, VoIP, 3G/4G, Operating Systems, Networks and Computer Architecture

Final Project: Student Management System Website using PHP/JS/HTML/CSS/Bootstrap.

## PROFESSIONAL EXPERIENCE

11/2024 – Present

**Data Analyst - Full Time (Remote)** , ObjectWays Technologies - Chennai (Tamil Nadu).  
LiDar Object Detection Data Annotation Through Image Processing for ML accuracy  
.BigQuery SQL and ETL processing (Dataform, Cloud Data Fusion, Apache Beam),  
Speech-To-Text (STT•French) data insights collection for ML accuracy Test. ~ NLP tools :  
vTensorAct Studio+ Amazon SageMaker+ Encord

4/2023 – 10/2024

**Student Researcher at Jain University** , Bangalore, India.  
**Implementing DSP algorithms**, analyzing filter characteristics, and experiments like generating signals, convolution, DFT, and FFT. Covered embedded system hardware (microcontrollers and FPGAs), digital signal/image processing, real-time intelligent systems systems, Smart Battery Management Systems for Autonomous Vehicles using Machine Learning.

10/2020 – 2/2022

**Network Systems Engineer Intern**, Celeste Telecom Mali Sarl- Bamako  
Assessed business communication needs and recommended PABX/VoIP solutions. Installed, configured, and upgraded network systems. Skilled in L2/L3 protocols (BGP, OSPF, EIGRP, RIP, VLAN, STP, VTP) and SD-WAN/SONiC. Managed and scaled networks with Cisco, Huawei, Netgate, and Fortinet.

## PUBLICATIONS ET PROJECT

- 2024 **‘SMART BATTERY MANAGEMENT SYSTEM FOR PORTABLE DEVICES TO ENHANCE BATTERY LIFE BASED ON MACHINE LEARNING’**  
*april 24 |IJIRT|Volume 10 Issue 11|ISSN:2349-6002, doi.org/10.64643/IJIRTV10I11-163173-459*
- 2023 **‘Digital Signal Processing Algorithm Computations Using Python Frameworks’**  
*Minor Project Research at ECE department*
- 2024 **‘Built-In Self- Test in VLSI design’,**  
*Presented at ECE-VLSI course, thought by Prof. Sunil MP*
- 2023 **“CMOS Power Minimization Techniques for Portable Devices”**  
*Paper submitted to Jain FET Best Paper Competition (February 2023, unpublished)*
- 2022 **“Tactical Advanced Computer (TAC)”**  
*Presented in ECE- Embedded Systems Course, thought by Prof. Ryan Das, May 2022*

## CONFERENCE AND SEMINAR PAPERS

- 2023 **‘Electronics And Communication Engineering - 2030 ’.**  
Held in march 2023 Presented at Jain University’s ECE Department Avalanche Club, Bangalore.

## ACADEMIC &TEACHING EXPERIENCE

- 2023 – Now **Generative AI Tools Tutor,**  
LLMs, ChatGPT, Perplexity, DeepSeek. Gen AI automation and AI Agent Building over n8n, TensorAct. AI assisted Coding and Revision.
- 2020 – Now **French Teacher Online,**  
As native French Speaker, I used to be part time French Tutor for A1,A2,B1,B2,C1, C2 for kids majorly and adults as well.

## ACTIVITIES

- 2019 – Present **Social Charity Youth of Mamaribougou**  
Youth Charity Trust organization for widows and Orphan in Mali through donation of kits, food and welfare

## SKILLS

- Languages **English and French** (bilingual); **Spanish** (conversational); **Arabic** (Fluent); **Hindi** (Fluent).

## REFERENCES

**Dr. Abdoulaye Sidibe**  
Department of Computer Sciences  
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